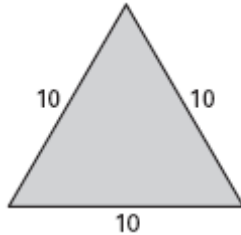


## Geometry 11.2 Assignment: Areas of Regular Polygons (pp 669-675)

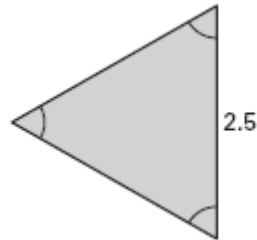
1. What is your name?

Find the area of the triangle.

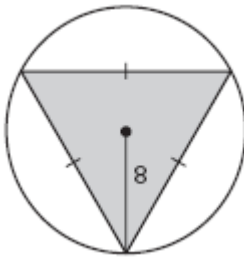
2.



3.



4.



Find the measure of a central angle of a regular polygon with the given number of sides.

5. 12 sides

6. 15 sides

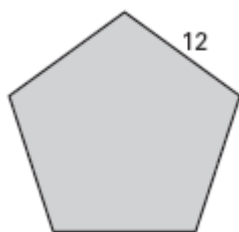
7. 25 sides

8. 32 sides

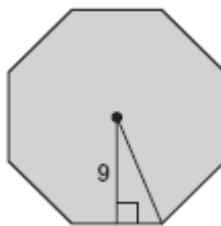
**Geometry 11.2 Assignment: Areas of Regular Polygons  
(pp 669-675)**

**Find the perimeter and area of the regular polygon shown.**

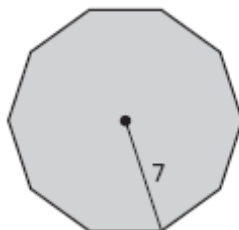
**9.**



**10.**



**11.**



**12. What is the area of an equilateral triangle with radius 15 cm?**

## Geometry 11.2 Assignment: Areas of Regular Polygons (pp 669-675)

**Solve.**

**13. What is the area of a regular hexagon with apothem 7.5 inches?**

**14. What is the area of a square with a diagonal 6.3 cm?**

**15. What is the approximate side length of a regular hexagon with area 100 square centimeters?**

**Decide whether the statement is *always*, *sometimes*, or *never* true.**

**16. \_\_\_\_** If the number of sides of a regular polygon is  $n$ , then the measure of the central angle is  $360^\circ \div n$ .

**17. \_\_\_\_** The radius of a regular polygon is greater than the apothem.

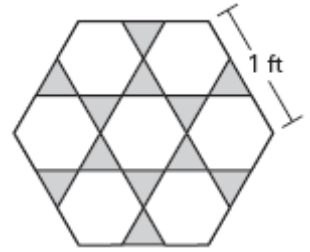
**18. \_\_\_\_** The radius of a regular hexagon of radius  $r$  is six times greater than the area of a regular triangle of radius  $r$ .

**19. \_\_\_\_** The area of a regular hexagon of radius  $r$  is six times greater than the area of a regular triangle of radius  $r$ .

## Geometry 11.2 Assignment: Areas of Regular Polygons (pp 669-675)

Use the diagram shown to answer the following.

20. What is the area of one regular triangle?



21. What is the area of one regular hexagon?

22. What percent of the tiling is shaded?

23. The cost of ceramic tiling is \$0.025 per square inch. What would be the cost of the design shown?

### Review.

**Solve the proportion.** (*Chapter 8 Section 1*)

24.  $\frac{x}{6} = \frac{11}{12}$

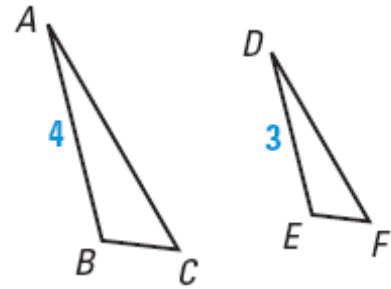
25.  $\frac{20}{4} = \frac{15}{x}$

26.  $\frac{12}{x+7} = \frac{13}{x}$

27.  $\frac{x+6}{9} = \frac{x}{11}$

## Geometry 11.2 Assignment: Areas of Regular Polygons (pp 669-675)

In the diagram shown,  $\triangle ABC \sim \triangle DEF$ . Use the figures to determine whether the statement is true or false. (Chapter 8 Section 3)



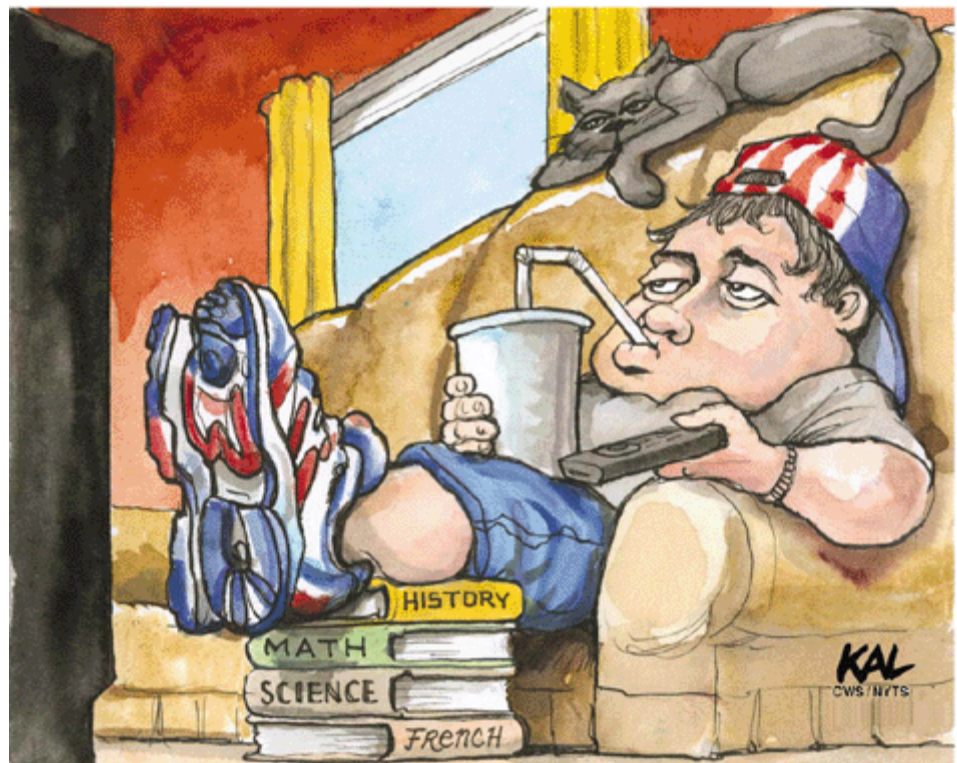
28.  $\frac{AC}{BC} = \frac{DF}{EF}$

29.  $\frac{DF}{AC} = \frac{EF + DE + DF}{BC + AB + AC}$

30.  $\angle B \cong \angle E$

31.  $\overline{BC} \cong \overline{EF}$

KAL  
THE ECONOMIST  
London  
ENGLAND



LAZY KIDS